

Iron/Nickel Alloy Rod (Fe55/Ni45)

Formula: Fe55/Ni45

Diameter: 13.5mm

Length: 200mm

UOM Code: 004-791-89

SKU: 1000000618-group

Product Code: FE18-RD-000125

Material Properties for Alloys

Magnetic Properties

Element	Value
Initial permeability	6000
Maximum permeability	40000
Coercivity (Hc)(A m ⁻¹)	8
Curie temperature(C)	450
Remanence from saturation (Brem)(T)	1
Saturation Induction(T)	1.6

Electrical Properties

Element	Value
Electrical resistivity(μOhmcm)	45
Temperature coefficient(K ⁻¹)	-

Thermal Properties

Element	Value
Melting point(C)	1400-1450
Specific heat(J K ⁻¹ kg ⁻¹)	460@23°C
Thermal conductivity(W m ⁻¹ K ⁻¹)	13@23°C
Coefficient of thermal expansion($\times 10^{-6}$ K ⁻¹)	7@20-100°C

Physical Properties

Element	Value
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Density(gcm³) 8.25

Mechanical Properties

Element	Value
Hardness - Vickers(kgf mm ²)	240
Tensile strength(MPa)	470